external apparatus as an apparatus to be responded to thereafter by the intelligent interconnecting device and causing the intelligent interconnecting device to judge whether or not this access is the first access, when it is judged in the third step that the authentication is given;

· a fifth step of causing the intelligent interconnecting device to extract and store a source IP address included in a packet which is received from the external apparatus in the authentication processing when this access of the external apparatus is judged to be the first access in the fourth step;

· a sixth step of determining the external apparatus as an apparatus not to be responded to thereafter by the intelligent interconnecting device when the external apparatus is judged not to be authenticated in the third step;

· a seventh step of causing the intelligent interconnecting device to judge whether or not the source IP address of the external apparatus giving the access thereto is identical with the stored source IP address when this access is judged not to be the first access in the first step;

· an eighth step of determining the external

apparatus whose source IP address is judged to be identical with the stored source IP address as an apparatus to be responded to thereafter by the intelligent interconnecting device and causing the intelligent interconnecting device to process the steps beginning from the second step when the source IP address of the external apparatus is judged to be identical with the stored source IP address in the seventh step; and

· a ninth step of determining the external apparatus whose source IP address is judged to be nonidentical with the stored source IP address as an apparatus not to be responded to thereafter by the intelligent interconnecting device when the source IP address of the external apparatus is judged to be nonidentical with the stored source IP address in the seventh step.

【0009】 This structure is particularly appropriate for carrying out the unauthorized access avoiding method in an intelligent interconnecting device in the first embodiment of the present invention and is realizable, for example, by what is called a microcomputer, or a circuit and software having functions equivalent thereto.

【0010】 According to a third embodiment of the present invention, a recording medium in which a computer readable unauthorized access avoiding program which is executed in an intelligent interconnecting device having a function of repeating a packet which is transmitted/received between a plurality of computers and being structured to be controllable by an external apparatus based on a TCP/IP protocol is recorded is provided, wherein the unauthorized access avoiding program comprises the following steps:

· a first step of causing the intelligent interconnecting device to judge whether or not a first access to the intelligent interconnecting device from outside has occurred;

· a second step of causing the intelligent interconnecting device to carry out authentication processing by using a user identifier and a password based on the TCP/IP protocol when it is judged in the first step that the first access from outside has occurred;

· a third step of causing the intelligent interconnecting device to judge after the authentication processing in the second step whether or not authentication is given;